CDC 2018 Workshop:
Traffic Flow Control via PDE Techniques
December 16, 2018
Room: Splash 10, Fontainebleau Hotel, Miami Beach, FL
Organizers:
Nikolaos Bekiaris-Liberis, Technical University of Crete
Maria Laura Delle Monache, INRIA
Delphine Bresch-Pietri, MINES ParisTech
Rafael Vazquez, University of Seville
Agenda:

`08.30-08.45:`	
Introduction, motivation, and outline of the workshop	

Session 1: Ramp metering and speed limits control. Chair: Nikos Bekiaris-Liberis

`08.45-09.30:`
Calming "stop-and-go" in congested traffic, by Miroslav Krstic, University of California, San Diego, USA
`09.30-10.15:`
Recent advances on Lyapunov-based control for traffic flow, by Christophe Prieur, CNRS, France

`10.15-10.30:`
Coffee break

`10.30-11.15:`
Feedback control of scalar conservation laws with application to density control in freeways by means of variable speed limits, by Iasson Karafyllis, National Technical University of Athens, Greece
`11.15-12.00:`
A fast semi-analytic algorithm for computing solutions associated with multiple fixed or mobile capacity restrictions: applications to bus holding control, by Christian Claudel, University of Texas at Austin, USA
`12.00-12.30:`
Can big data help traffic flow control?, by Maria Laura Delle Monache, Inria Grenoble-Rhone Alpes, France

`12.30-14.00:`
Lunch break

Session 2: Control via connected & automated vehicles. Chair: Maria Laura Delle Monache

`14.00-14.45:`
Lagrangian controls for traffic flow with autonomous and connected vehicles, by Benedetto Piccoli, Rutgers University, USA
`14.45-15.30:`
Macroscopic modeling of traffic control by autonomous vehicles, by Paola Goatin, INRIA, France

`15.30-15.45`
Coffee break

`15.45-16.30:`
Mitigating traffic waves with connected automated vehicles, by Gabor Orosz, University of Michigan, Ann Arbor, USA
`16.30-17.00:`
Traffic flow control via PDEs: Delay-compensating and fault-tolerant designs, by Nikolaos Bekiaris-Liberis, Technical University of Crete, Greece

`17.00-17.15:`
Concluding remarks